

Alaska, GCI & Broadband Service to Rural Schools, Libraries, and Healthcare Providers



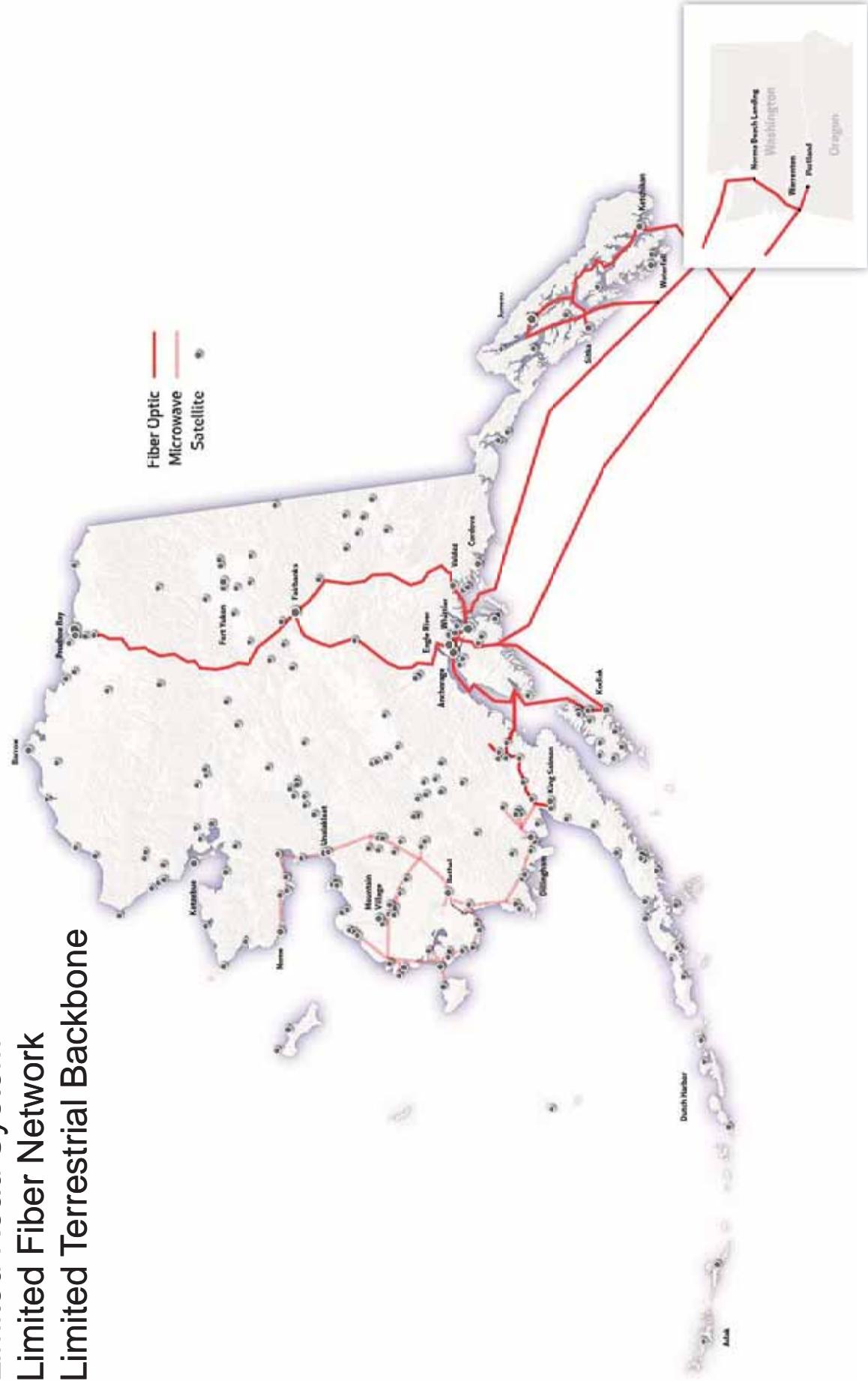
Commissioner Mike O'Rielly
August 2014



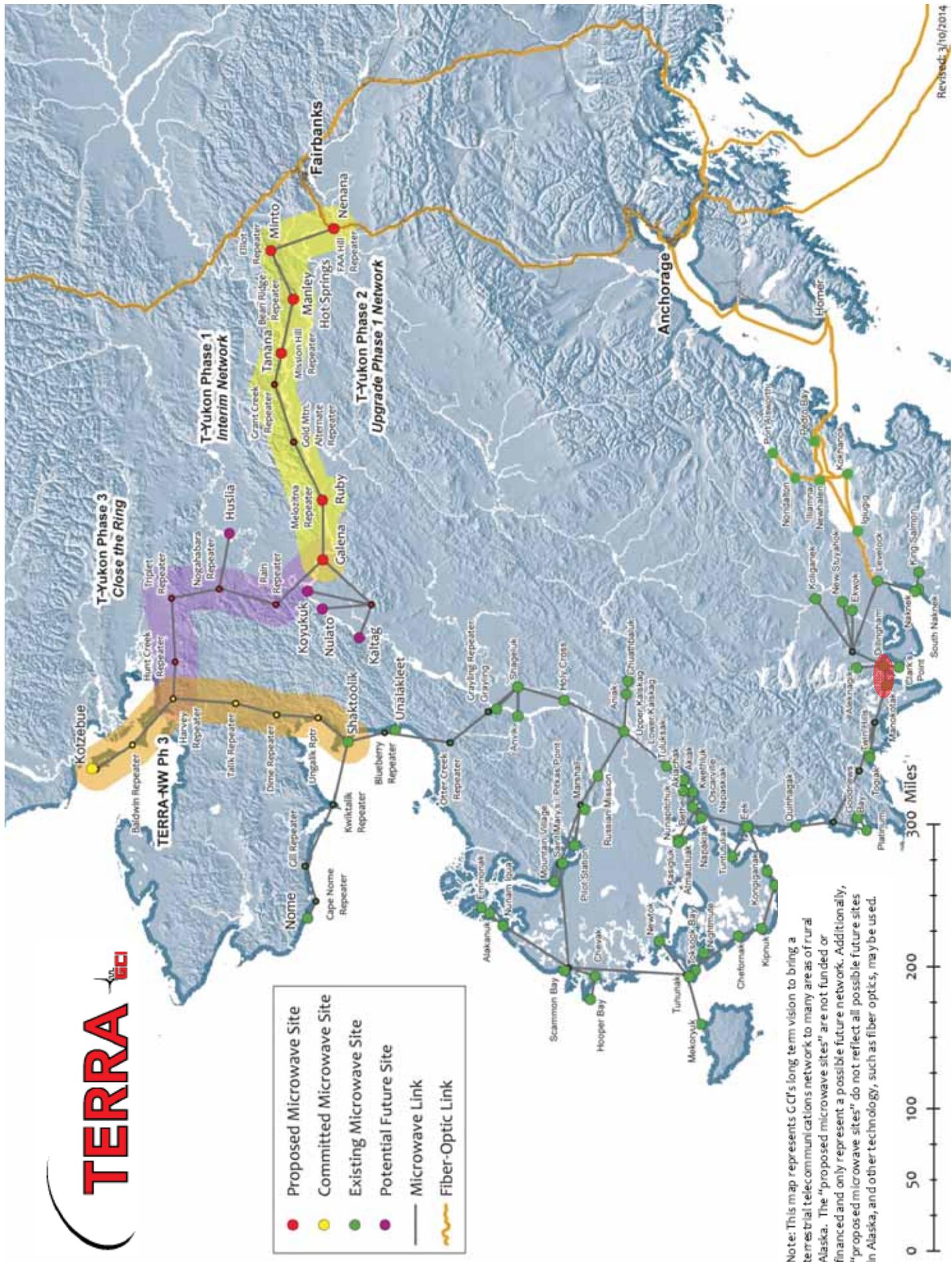
Limited Road System

Limited Fiber Network

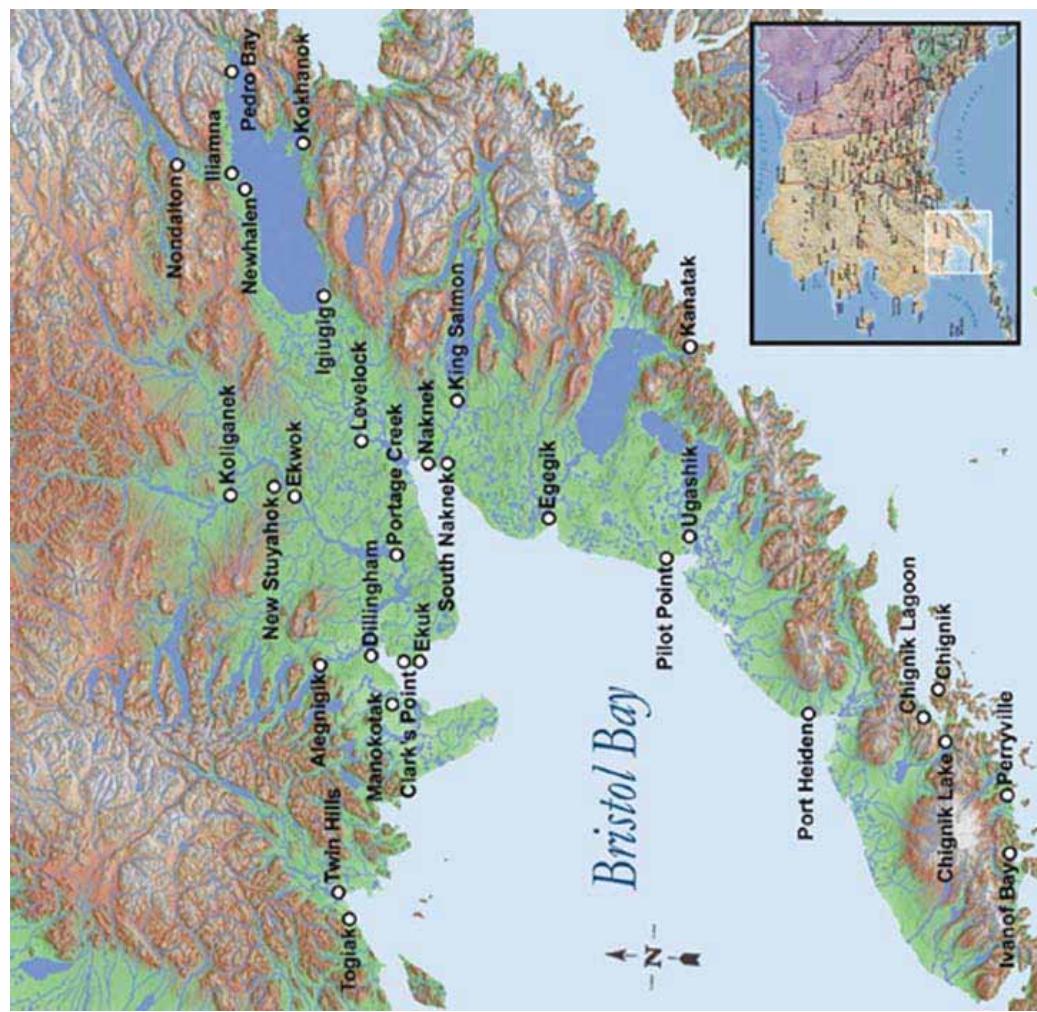
Limited Terrestrial Backbone



TERRA



Bristol Bay

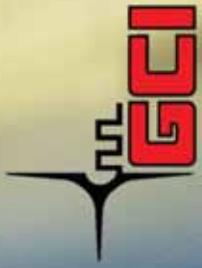


(from http://www.visitbristolbay.org/bbvc/images/bb_map_large.jpg)

Alaska ILECs:
Islands in a Sea of
Mountains, Tundra, and
Waterways

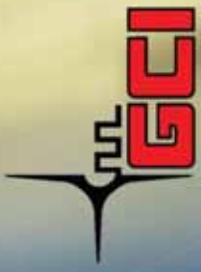
ACS OF ANCHORAGE	COPPER VALLEY TEL
ACS-AK GREAT LAND	CODDOVATTEL COOP
ACS-AK JUNEAU	INTERIOR TEL CO INC
ACS-FAIRBANKS INC	KETCHIKAN PUBLIC UT
ACS-N GLACIER STATE	MATANUSKA TEL ASSOC
ACS-N SITKA	MALUKUT TEL CO INC
ADAK TEL UTILITY	NORTH COUNTRY TEL CO
ALASKA TEL CO	HUSHWACK FLEC & TEL
ARCTIC SLOPE TEL	OTT TEL COOPERATIVE
BETLES TEL CO INC	SUMMITTEL & TEL-AK
BRISTOL BAY TEL COOP	UNITED UTILITIES INC
BUSH+TEL INC	YUKON TEL CO INC
CIRCLE UTILITIES	

Dillingham



Current Population:	2329 (2010 U.S. Census Population)
Federally-Recognized Tribe:	The Manokotak Village Council
Regional Native Association:	Bristol Bay Native Association, Inc.
School Administration:	Dillingham City School District
Healthcare Provider:	Bristol Bay Area Health Corporation
ILEC:	Bristol Bay Telephone Cooperative
Wireless Providers:	Bristol Bay Cellular GCI/ACS (AWN)

Dillingham: Regional Center of Bristol Bay



Location and Climate

Dillingham is at the extreme northern end of Nushagak Bay in northern Bristol Bay, at the confluence of the Wood and Nushagak Rivers. It lies 327 miles southwest of Anchorage, and is a 6 hour flight from Seattle. The area encompasses 33.6 sq. miles of land and 2.1 sq. miles of water. Average summer temperatures range from 37 to 66; average winter temperatures range from 4 to 30. Annual precipitation is 26 inches, with 65 inches of snow. Winds of up to 60-70 MPH may occur between December and March. The Nushagak River is ice-free from June through November.

History, Culture and Demographics

The area around Dillingham was inhabited by Eskimos, Athabascans, and Aleuts and became a trade center when Russians erected the Alexandrovski Redoubt (Post) in 1818. Local Native groups and Natives from the Kuskokwim Region, the Alaska Peninsula and Cook Inlet mixed together as they came to visit or live at the post. The community was known as Nushagak by 1837, when a Russian Orthodox mission was established. In 1881 the U.S. Signal Corps established a meteorological station at Nushagak. In 1884 the first salmon cannery in the Bristol Bay region was constructed by Arctic Packing Co., east of the site of modern-day Dillingham.

A federally recognized tribe is located in the community - the Curyung Native Village Council. 60.9% of the population are Alaska Native or part Native. Traditionally a Yup'ik Eskimo area, with Russian influences, Dillingham is now a highly mixed population of non-Natives and Natives. The outstanding commercial fishing opportunities in the Bristol Bay area are the focus of the local culture.

During the 2000 U.S. Census, there were 1,000 total housing units, and 116 were vacant. 39 of these vacant housing units are used only seasonally. 1,154 residents were employed. The unemployment rate at that time was 7.11%, although 32.2% of all adults were not in the work force. The median household income was \$51,458, per capita income was \$21,537, and 11.7% of residents were living below the poverty level.

Facilities, Utilities, Schools and Health Care

Around 90% of homes are fully plumbed. Dillingham's water is derived from three deep wells. Water is treated, stored in tanks (capacity is 1,250,000 gallons) and distributed. Approximately 40% of homes are served by the City's piped water system; 60% use individual wells. The core townsite is served by a piped sewage system; waste is treated in a sewage lagoon. However, the majority of residents (75%) have septic systems. Dillingham Refuse Inc., a private firm, collects refuse three times a week. The Chamber of Commerce coordinates recycling of several materials, including fishing web. A new landfill site with a bailing facility is currently being planned. Nushagak Electric owns and operates a diesel plant in Dillingham which also supplies power to Aleknagik. Electricity is provided by Nushagak Electric Cooperative.

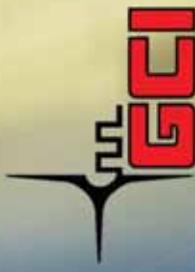
There are 2 schools located in the community, attended by 526 students.

Economy and Transportation

Dillingham is the economic, transportation, and public service center for western Bristol Bay. Commercial fishing, fish processing, cold storage and support of the fishing industry are the primary activities, including fish processing plants. 230 residents hold commercial fishing permits. During spring and summer, the population doubles. The city's role as the regional center for government and services helps to stabilize seasonal employment. Many residents depend on subsistence activities and trapping of beaver, otter, mink, lynx and fox provide cash income. Salmon, grayling, pike, moose, bear, caribou, and berries are harvested.

Dillingham can be reached by air and sea. The State-owned airport provides a 6,404' paved runway and Flight Service Station, and regular jet flights are available from Anchorage. A seaplane base is available 3 miles west at Shannon's Pond; it is owned by the U.S. Bureau of Land Management, Division of Lands. A heliport is available at Kanakanak Hospital. There is a City-operated small boat harbor with 320 slips, a dock, barge landing, boat launch, and boat haul-out facilities. It is a tidal harbor and only for seasonal use. Two barge lines, make scheduled trips from Seattle. There is a 23-mile DOT-maintained paved road to Aleknagik; it was constructed in 1960 as a gravel road, partially paved in 1998 and then completely paved in 2004.

Kanakanak Hospital in Dillingham



Located in Dillingham, Kanakanak Hospital is a 16-bed facility providing 24-hour medical, pediatric and obstetrical care. The hospital is fully accredited by the Joint Commission on Accreditation of Hospitals (JCAHO). Offices for a number of BBAHC's ancillary departments - Alcohol & Drug Abuse, Community Health Aide Program, Emergency Medical Services, WIC and the Infant Learning Program - adjoin the hospital. Also located on hospital grounds are Aanamta ("Our Mother's") House, a pre-natal boarding home, and the Bristol Bay Counseling Center (in a new building completed in 2006).

A limited number of apartments for qualifying permanent and temporary employees are also located on the compound. Housing is available and assigned using a priority list for employees who are on-call and need to be at the hospital for emergencies.

Located off-compound but close by are Kanakanak House, headquarters to BBAHC's Environmental Health and Injury Prevention programs, and Our House, a temporary residential facility for psychiatric patients.

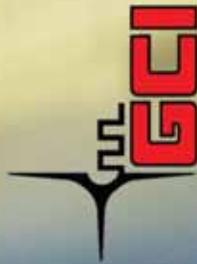
Formed in 1973, BBAHC began managing and operating Kanakanak Hospital and the Bristol Bay Service Unit for the Indian Health Service (IHS) in 1980. It was the first tribal organization in the United States to do so under P.L. 93-638.

(from <http://www.bbahc.org/kanakanak.html>)

Manokotak

Current Population:	442 (2010 U.S. Census Population)
Federally-Recognized Tribe:	The Manokotak Village Council
Regional Native Association:	Bristol Bay Native Association, Inc.
School Administration:	Southwest Region School District
Healthcare Provider:	Bristol Bay Area Health Corporation
ILEC:	Nushagak Electric & Telephone Cooperative ("NushTel")
Wireless Provider:	GCI/ACS (AWN)

Manokotak



Location and Climate

Manokotak is located 25 miles southwest of Dillingham on the Igushik River. It lies 347 miles southwest of Anchorage. The area encompasses 36.4 sq. miles of land and 0.9 sq. miles of water. Average summer temperatures range from 40 to 70; winter temperatures average from 4 to 30. Annual precipitation ranges from 20 to 26 inches. The River is ice-free from June through mid-November.

History, Culture and Demographics

Manokotak is one of the newer villages in the Bristol Bay region. It became a permanent settlement in 1946-47 with the consolidation of the villages of Igushik and Tuklung. People also migrated from Kulukak, Togiak and Aleknagik. Igushik is now used as a summer fish camp by many of the residents of Manokotak. A school was built in 1958-59, and a post office was established in 1960. Trapping has been an attractive lure to the area, although it has declined since the 1960s.

A federally-recognized tribe is located in the community -- the Manokotak Village Council. The population of the community consists of 94.7% Alaska Native or part Native. Manokotak is a Yup'ik Eskimo village with a fishing, trapping and subsistence lifestyle. The sale, importation or possession of alcohol is banned in the village. During the 2000 U.S. Census, total housing units numbered 106, and vacant housing units numbered 13. Vacant housing units used only seasonally numbered 2. U.S. Census data for Year 2000 showed 90 residents as employed. The unemployment rate at that time was 13.73 percent, although 64.84 percent of all adults were not in the work force. The median household income was \$26,875, per capita income was \$9,294, and 35.3 percent of residents were living below the poverty level.

Facilities, Utilities, Schools and Health Care

Water is derived from two wells, is treated and stored in a 150,000 gallon water storage tank. A piped water and sewer system, constructed in 1972, serves 68 households and the school with complete plumbing. Electricity is provided by Manokotak Power Company. There is one school located in the community, attended by 142 students. The local health clinic is the Manokotak Village Clinic. Emergency Service is provided by volunteers and a health aide. Auxiliary health care is provided by Manokotak First Responders.

Economy and Transportation

96 residents hold commercial fishing permits for salmon and herring fisheries. Many residents also trap fox, beaver, mink and otter. Most villagers leave Manokotak during the fishing season. Everyone depends heavily on fishing and subsistence activities, and usually move to Igushik or Ekuuk each summer. Salmon, herring, sea lion, beluga whale, trout, ptarmigan, duck and berries are harvested. Sharing relationships exist with several area villages, especially Togiak and Twin Hills.

Manokotak is accessible by air and water. Regular and charter flights are available from Dillingham. There is a State-owned 2,720' long by 60' wide lighted gravel airstrip located one mile to the north, and a 5,000' designated seaplane base. Lighterage services deliver cargo each summer, but must pull up to the mud beach; there are currently no docking facilities on the Igushik River. The Igushik River consists of tight, broad meandering loops; therefore many miles of waterway must be traveled to cover a comparably short distance in air miles. A 6.5-mile road to a barge landing area on Snake River began construction in 1998. ATVs, snowmachines, and some vehicles are used for local travel. The Manokotak Trail to Dillingham is used by snowmachines during winter to haul fuel.

(from http://www.swrstd.org/home/index.php?option=com_content&view=article&id=56:manokotak&catid=66:our-communities&Itemid=137)

Village Clinics

BBAHC manages 29 village clinics, staffed by approximately 75 health aides, in the Bristol Bay region. Two-thirds of the region's 8,000 inhabitants live in these rural communities and roughly 22,900 visits a year occur in the village clinics, compared to 44,800 visits at Kanakanak Hospital in Dillingham.

Each village clinic is staffed by at least two resident Health Aides and visited periodically by Kanakanak's medical staff, including doctors, nurses, dentists, audiologist and resident optometrist. Two sub-regional clinics, located in Chignik and Togiak, employ mid-level practitioners to provide more extensive patient care, as well as training and support for health aides, to neighboring communities.

Kanakanak Hospital is linked to 27 of the village clinics by a wide area computer network (WAN) that enables Community Health Aides to transmit patient information to Kanakanak physicians for assistance, diagnosis and appropriate treatment. Store-and-forward technologies, (Telemedicine) videoconferencing, streaming and teleradiology services are transmitted via this network. Another part of this network links Kanakanak physicians with the Alaska Native Medical Center in Anchorage and other specialized services outside Alaska.

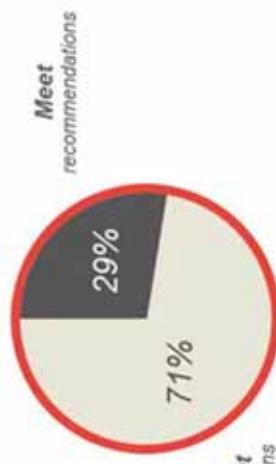
(From <http://www.bbahc.org/clinics.html>)

Rural Alaska School Broadband Gap

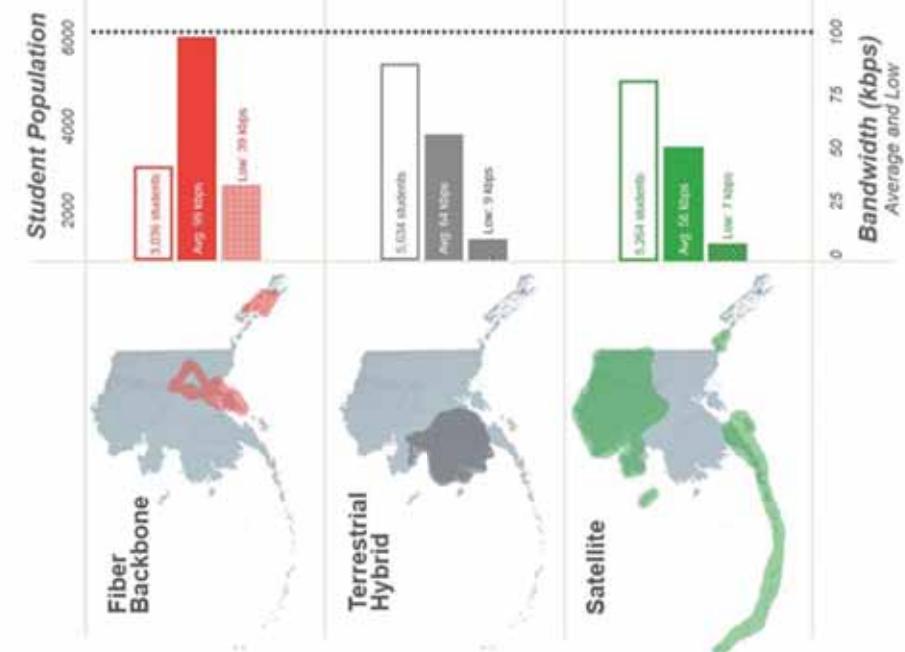


The Gap that Exists

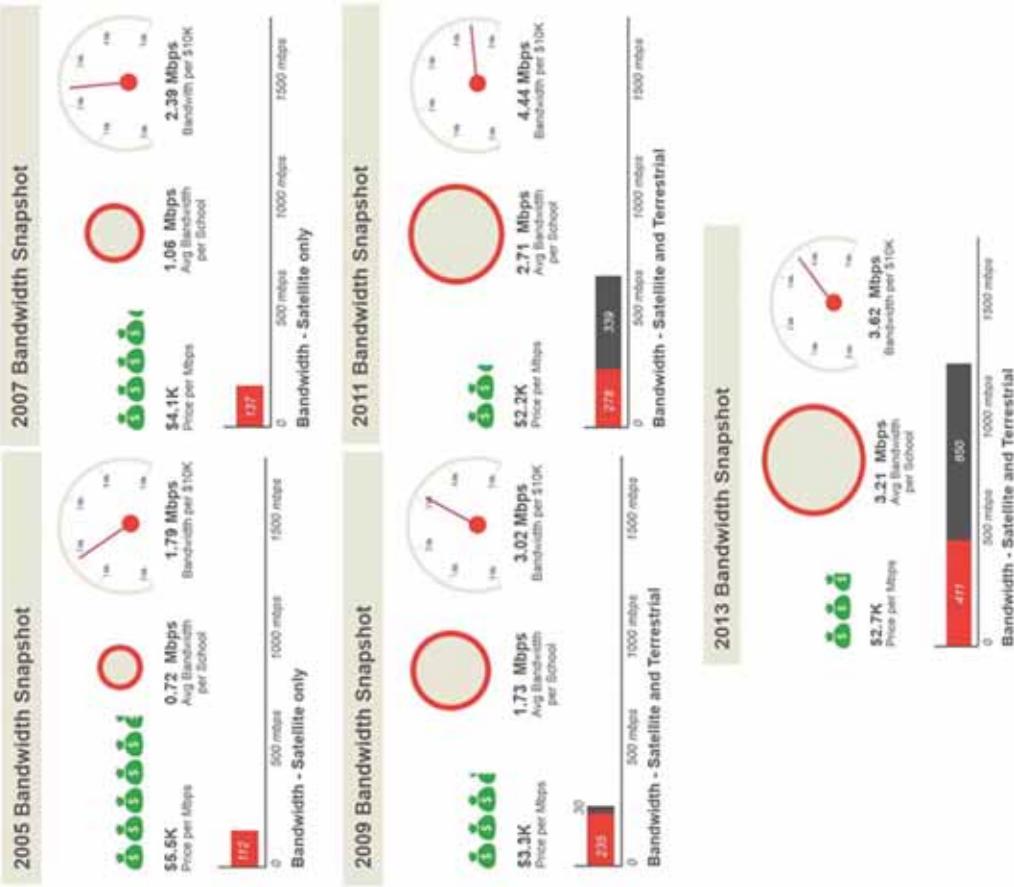
Sample of Alaska schools that meet SETDA recommendations of 100 Kbps per student in 2014-2015



Snapshot of Alaska



Broadband Price Compression



E-Rate Reform: Connectivity In the Most Isolated Communities



Continue to Focus E-Rate Support on Essential Connectivity

- Don't shift support used for connecting isolated rural schools to fund internal connections, equipment, or ancillary services
- *Enhancing the experience of students with fiber connections is important, but should not supplant basic connectivity to rural students*

Preserve the Available Discount to the Most Isolated Schools Without Access to Fiber Middle-Mile Services

- School districts will decrease service, rather than increase budgets

Per-student Caps Will Destroy Connectivity to Alaska Students

- Even doubling a per-student rural cap as has been proposed, could reduce support in Alaska by **86%**